

An Occasional Medical Newsletter from The Blood Care Foundation

Dear Member,

Occasionally I find useful information in the most unexpected places. I usually consign the Drug and Therapeutics Bulletin to the waste paper basket, as it rarely contains anything of relevance to Blood Transfusion. However, as you will see below, I am grateful that today I followed my maxim of never discarding anything prior to having a cursory glance at the contents. In my 18th Newsletter I pointed out that we would not actually reach the 3rd millennium until 1st January 2001. Now in this, my 28th, may I wish you, on behalf of the Trustees and all the staff of the Blood Care Foundation, a Happy and Blessed Christmas 2000 and a Prosperous, and hopefully less commercialised, New Year and true commencement of the 3rd millennium.

Adverse Reactions to Foods

The Committee on Toxicity of Chemicals in Food (COT) reported on 26th July 2000. The report notes that, whilst 20-30% of the UK population believes that they have some adverse reaction to a food, the actual incidence is 1.4-1.8%. Most adverse reactions are to natural foods and synthetic additives or preservatives only account for about 0.03%. In children 90% of reactions are caused by cows' milk, chickens' eggs, various nuts and soya protein. In adults the majority of reactions are caused by peanuts, tree nuts, fish and shellfish. A copy of the report can be obtained by e-mail from akosua.adjei@foodstandards.gsi.gov.uk.

Cytochrome P450 Enzymes

Cytochrome P450 enzymes have a major role in the metabolism of numerous drugs. They also have important interactions, not only with other drugs, but also with alcohol and a whole range of foods as diverse as charcoal-grilled hamburgers, grapefruit juice and cauliflower. There are between 40 and 50 isoenzymes belonging to the cytochrome P450 group, and these are frequently the cause of drug overdose by inhibiting metabolism or treatment failure by increasing the rate of metabolism. The article, "Why bother about cytochrome P450 enzymes", is a must read for anyone who, like me, was unaware of their existence. (*Drugs & Therapeutics Bull.* 2000;**38(12)**:93-5)

Ebola Virus Vaccine

Ebola virus infections are almost always fatal and the current outbreak in the northern Gulu district of Uganda has already claimed 140 lives. At present there are no protective vaccines, but a team led by Drs Nancy Sullivan and Gary Nabel from the vaccine research division of the National Institutes of Health may have solved the riddle. By preparing a vaccine that stimulates both the cellular and humoral arms of the immune system, they have been able to protect macaque monkeys who were subsequently exposed to the virus. Within a week all the control monkeys, who had not been vaccinated, were dead but the vaccinated monkeys are alive and well six months after exposure and still show no signs of harbouring the virus in their blood. It is hoped that it will be possible to use this work to produce a human vaccine in the very near future. (*Nature.* 2000;**408**:605-9)

Malaria

A malaria epidemic in Burundi has already affected over 270,000 people in the northern highlands districts. With the advent of the rainy season, WHO expect this figure to exceed half a million. The effects of malaria are gravest in very young children and pregnant women. One of the best ways in preventing malaria is to discourage mosquitoes from biting, but the best insect repellent, diethyltoluamide (DEET), has, anecdotally, been said to have toxic effects in these two groups of patients. In recent correspondence, Starr has challenged this, quoting a large retrospective study of 9086 persons using DEET. This study showed that children were no more likely to develop adverse effects than adults and even when there was a problem, in 99% of cases there were no long term sequelae. Starr recommends that DEET, in concentrations up to 30%, should be the repellent of choice in all age groups. He also refers to another study in which children, in the age group 3 months to 5 years, were given mefloquine. The only significant side effects were gastrointestinal, the major one being early vomiting. However this did not occur when mefloquine was used as a prophylactic. No serious neuropsychiatric adverse events have been described in children. His conclusion is, that in children weighing over 5kg, mefloquine is an acceptable choice for prophylaxis. Finally, Delaunay and colleagues describe the frightening case of a lady who was persuaded to use homeopathic prophylaxis when visiting Togo. Happily the end of the story was not fatal, but she spent 2 months in intensive care with multiple organ failure. Their conclusion is that homeopathic drugs are ineffective for malaria prevention. (*BMJ*. 2000;**321**:1288)

HIV and Oral Sex

The DoH has reviewed the evidence on the likelihood of HIV being transmitted by oral sex. The conclusion is that the risk of HIV transmission during oral sex is much higher than had originally been believed. Further information can be obtained from Ms Ruth Hickson, Room 631B, Skipton House, 80 London Road, LONDON SE1 6LH or on www.doh.gov.uk/eaga.

Physical Activity and Cancer

We are all well aware that physical activity has beneficial effects on the incidence of cardiovascular disease and non-insulin dependent diabetes, as well as promoting a sense of well being and combating many minor psychiatric disorders such as Seasonal Affective Disease (SAD). Now there is an increasing body of evidence appearing, which suggests that physical activity can prevent cancer. At present it points to a potentially important protective effect against colonic cancer and probably breast cancer, with no association with cancer of the rectum. Further data is required to assess the effects on other cancers but notably, physical exertion does not appear to increase the risk of any cancer. The optimal mix of type, intensity and duration of physical exercise with regard to cancer protection has yet to be established, but moderate endurance-type activity, such as cycling and walking can only be beneficial. (*BMJ*. 2000;**321**:1424-5)

Monday, 08 December 2003

Michael JG Thomas
MA, MB, FRCP (Edin), DTM&H
Clinical Director